

Curtis Lumber:

Energy efficient lighting for retailers

March 2, 2006
National ENERGY STAR
Lighting Partner Meeting
San Diego, California

Projects

- Lighting Display Showroom
- Lighting Lab
- Main Facility Lighting Project

How these projects came about?

- The general lighting in our facility was our first consideration.
- Ballast failures
 - Curtis had over 60 fixtures out, replacing ballasts become a priority.
- Fire potential
 - Our old ballasts were so hot that they were melting out insulation.
- Re-lamping of facility
 - We received several proposals to redo out lighting, it took over a year to settle on one contractor.
- Displaying our products well and reaching a growing market was obvious

Lighting Display Showroom



How this came about?

- Rebuilding of the display
 - We had a low cost product that was poorly displayed and could not be sold with our custom kitchens or baths.
- Reduce electric consumption
 - From the start we designed the display to use less than 10 percent of the energy of any current lighting showroom and this is how we will pay for it.
- Create a different type of showroom
 - We needed to create a showroom that complimented our other high-end showrooms and attracted consumer interest.

What kind of support did we receive?

- LRC
- NYSERDA
- American Energy Care (AEC)
- J.H. Bennett
- Eames Construction
- L & C Electric
- Suburban
- Velux
- Allied
- Our Folks



How can other people copy what we did?

- Have a need
 - We needed to repair or redo our current lighting display.
- Recognize an opportunity
 - Redoing our lighting display and improving performance will be cost effective.
- Be flexible in the solution you require
 - Keep an open mind and listen to the experts.
- Stay focused
 - Keep the company's best interest at heart.

How can other people copy what we did?

- Detail
 - The devil is truly in the detail, these projects are more intensive than you realize.
- Ask questions
 - Listen and ask questions concerning cost and longevity, what will it cost you in the end? What are the benefits? Will it work? How long will it work for?
- Seek support
 - When you get going there is support from many sources and our contractors were key.
- Be flexible during execution process
 - Challenges will arise and so will opportunities, keep an open mind as to the benefits and the costs involved.

How can other people copy what we did?



- Keep looking for opportunity
 - Keep looking for ways to reduce cost and improve the outcome.
- Get marching orders and move out when you lock a major aspect of the project
 - When everyone agrees lock the project and move as quickly as you can to completion.
- Everybody has something to contribute
 - Listen to what people are saying and implement the good ideas.
- Build a network and stay connected
 - You are not alone and there is a lot of support for within and without.

Lighting Lab

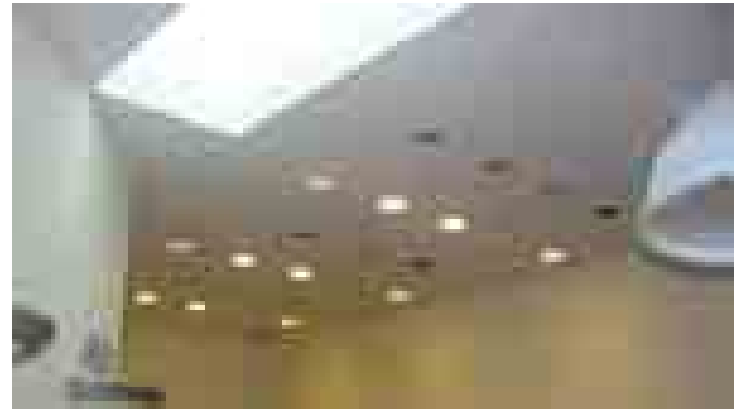


How this came about?

- Collaborative effort
 - Lighting Research Center
 - World class academic facility right in our neighborhood
 - Curtis Lumber
 - A growing company seeking to reduce energy consumption, improve lighting and provide world class products and service to our customers
 - NYSERDA
 - Great agency to work with providing insight and funding for a wide variety of projects

How this came about?

- Contractor involvement essential from the beginning
 - Pick professionals and build a great team
- Educate: using service and products show what can be done, the LRC funded by NYSERDA was key
 - Builders/Contractors
 - Remodelers
 - Consumers
- Demonstrate: Lead by example
 - Great Aesthetic Appeal
 - Effectiveness of efficient lighting design
 - Multi-uses of efficient lighting



What kind of support did we receive?



- Lighting Research Center
 - Design
 - From the aesthetics to the functionality they stood by us.
 - Technology
 - The LRC is at the cutting edge.

What kind of support did Curtis Lumber provide?

- Funding
 - We put our hard earned money on the line.
- Design
 - Through a collaboration of effort we developed winners.
- Contractor Support
 - Gifted and talented professionals are essential.
- Marketing
 - Letting the public and especially customers know.
- Project Leadership
 - In the end you have to drive each process to completion.

What kind of support did we receive?

- NYSERDA
 - Funding
 - Money for reducing return on investment makes costly projects acceptable.
 - Marketing
 - Energy savings can come about by many methods and telling others through marketing assistance, thus reaching a wider audience is essential to success.

How can other people copy what we did?

- Have a need
 - These projects are very expensive and you must have a need to change what you are doing.
- Develop a beautiful, logical and cost effective design
 - If it does not look good or does not work you are wasting time and money.
- Develop a network and stay connected
 - This is a very dynamic process and change as well as roadblocks must be addressed.



Main Facility Lighting Project



A \$1.5 Million project with a payback of about 6 years through tax incentives, grants and energy savings.

Projects

- Skylights
 - Direct sunlight within our entire facility improves lumen levels and through CRI appearance of all objects, this represents well over 75,000 watts of natural light.
- PV System
 - Collecting 50,000 watts and distributing it where needed during daylight hours.
- Fluorescent Lighting
 - Making up for lack of natural lighting, dimmable in all retail areas and controlled by occupancy sensors everywhere.
- Computer controlled lighting
 - Computers make adjustment of lighting levels and duration of illumination a snap.



How this came about?

- People saw an opportunity
 - We saw a chance to fix a problem, reduce operating cost and vastly improve our professional appearance.
- Practice what we preach
 - Since we now sell lighting we had to become the area experts and apply what we learned to our own operation.
- Drastically reduce energy consumption in facilities
 - Saving money is a **good** thing.

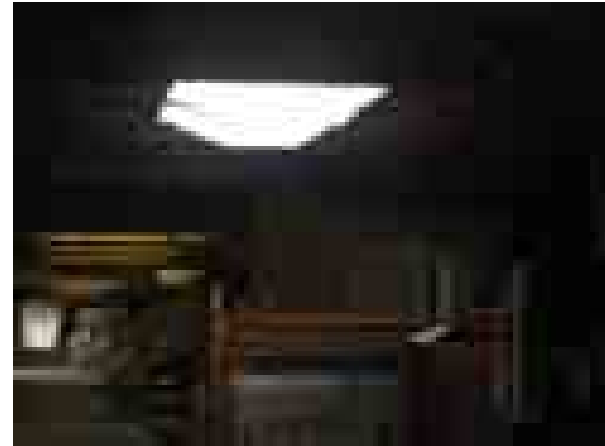
What kind of support did we receive?



- Velux
- NYSERDA
- LRC
- American Energy Care (AEC)
- Eames Construction
- JH Bennett
- L & C Electric

How can other people copy what we did?

- Have a need
 - Something must drive you.
- Develop a logical design
 - The design must work, be attractive and above all be cost effective.
- Develop a network and stay connected
 - These are tough projects and you will need all sorts of help.



Future Projects

- AC/DC Fluorescent System
 - We are about to begin installation.
- Photovoltaic Power Generation
 - We are mounting the hardware on the building as we speak.
- Co-Generation
 - This may or may not be a cost effective solution but we are looking.

Future Projects

I can not keep spending the companies money. We need to show a return on what we are doing. Using creative financing thanks to NYSERDA we have lower monthly bills including debt repayment than our previous power bill.